CLAIMS

1. A method of training a device for linearizing a radiofrequency amplifier (31) which is included within a radiofrequency transmitter (30) of a first equipment (Figure 1) of a radiocommunication system, which transmitter is adapted for transmitting bursts according to a determined frame structure, each burst comprising symbols belonging to a determined alphabet of symbols, the method comprising the steps consisting in:

a) generating a linearization training sequence (Figure 5) comprising a determined number N of symbols, where N is a determined integer;

b) transmitting the linearization training sequence by means of the transmitter in at least certain of the bursts transmitted by the latter;

c) comparing the linearization training sequence transmitted with the linearization training sequence generated so as to train said linearization device,

characterized in that at least a determined number N1 of symbols of the linearization training sequence sent first, where N1 is a determined integer less than or equal to N, belong to a subalphabet of symbols included within said alphabet of symbols, said subalphabet of symbols consisting of symbols which, in isolation or combination, give the burst a narrower spectrum than said alphabet of symbols as a whole.

2. The method as claimed in claim 1, wherein the linearization training sequence comprises a determined number N2 of other symbols transmitted last, at least certain of which belong to the alphabet of symbols excluding said subalphabet of symbols, or N2 is an integer less than N.

3. The method as claimed in claim 2, wherein a majority or the totality of said N2 other symbols transmitted last belong to the alphabet of symbols excluding said subalphabet of symbols.

4. The method as claimed in claim 2 or claim 3, wherein N1+N2=N.

5. The method as claimed in any one of the preceding claims, according to which the number N is fixed.

6. The method as claimed in any one of the preceding claims, according to which the linearization training sequence occupies only a part of the burst in which it is transmitted.

7. The method as claimed in claim 6, wherein the linearization training sequence occupies around 5% of the duration of the burst in which it is transmitted.

8. The method as claimed in any one of the preceding claims, wherein the linearization training sequence is transmitted at the start of the frame.

9. The method as claimed in any one of the preceding claims, wherein the linearization training sequence is further transmitted during a change of logical channel, a change of frequency and/or a change of power rating of the mobile terminal.

10. The method as claimed in any one of the preceding claims, wherein the training sequence is included within or includes a sequence of symbols that is designed moreover to allow the dynamic control of the gain of a variable-gain amplifier of a radiofrequency receiver of a second item of equipment of the radiocommunication system with which said first equipment communicates.

11. A device for training a device (33) for linearizing a radiofrequency amplifier (31) of a radiofrequency transmitter (30) which is included within a first equipment (Figure 1) of a radiocommunication system, which transmitter is adapted for transmitting bursts according to a determined frame structure, each burst comprising symbols belonging to a determined alphabet of symbols, the device comprising:

a) means (300, 10, 20) for generating a linearization training sequence (Figure 5) comprising a determined number N of symbols, where N is a determined integer;

b) means (300, 30) for transmitting the linearization training sequence by means of the transmitter in at least certain of the bursts transmitted by the latter;

c) means (300, 34) for comparing the linearization training sequence transmitted with the linearization training sequence generated so as to train said linearization device,

characterized in that at least a determined number N1 of symbols of the linearization training sequence sent first, where N1 is a determined integer less than or equal to N, belong to a subalphabet of symbols included within said alphabet of symbols, said subalphabet of symbols consisting of symbols which, in isolation or combination, give the burst a narrower spectrum than said alphabet of symbols as a whole.

12. The device as claimed in claim 11, wherein the linearization training sequence comprises a determined number N2 of other symbols transmitted last, at least certain of which belong to the alphabet of symbols excluding said subalphabet of symbols, or N2 is an integer less than N.

13. The device as claimed in claim 12, wherein a majority or the totality of said N2 other symbols

transmitted last belong to the alphabet of symbols excluding said subalphabet of symbols.

14. The device as claimed in claim 12 or claim 13, wherein N1+N2=N.

15. The device as claimed in any one of claims 11 to 14, wherein the number N is fixed.

16. The device as claimed in any one of claims 11 to 15, wherein the linearization training sequence occupies only a part of the burst in which it is transmitted.

17. The device as claimed in claim 16, wherein the linearization training sequence occupies around 5% of the duration of the burst in which it is transmitted.

18. The device as claimed in any one of claims 11 to 17, wherein said means for transmitting are adapted for transmitting the linearization training sequence at the start of the frame.

19. The device as claimed in any one of claims 11 to 18, wherein said means for transmitting are adapted for transmitting the linearization training sequence during a change of logical channel, a change of frequency and/or a change of power rating of the mobile terminal.

20. The device as claimed in any one of the preceding claims, wherein the training sequence is included within or includes a sequence of symbols that is designed moreover to allow the dynamic control of the gain of a variable-gain amplifier of a radiofrequency receiver of a second wherein equipment of the radiocommunication system with which said first item of equipment communicates.

21. A mobile terminal of a radiocommunication system, comprising a radiofrequency transmitter (30) having a radiofrequency amplifier and a device (33) for linearizing the radiofrequency amplifier, characterized in that it further comprises a device for training the linearization device as claimed in any one of claims 11 to 20.

22. A base station of a radiocommunication system comprising a radiofrequency transmitter having a radiofrequency amplifier and a device for linearizing the radiofrequency amplifier, characterized in that it furthermore comprises a device for training the linearization device as claimed in any one of claims 11 to 20.

23. A linearization training sequence (Figure 5) intended to be transmitted by means of a radiofrequency transmitter (30) of a mobile terminal (Figure 1) or of a base station of a radiocommunication system, which transmitter is adapted for transmitting bursts according to a determined frame structure, the linearization training sequence comprising a determined number N of symbols, where N is a determined integer, these symbols belonging to a determined alphabet of symbols, characterized in that at least a determined number N1 of symbols of the linearization training sequence sent first, where N1 is a determined integer less than or equal to N, belong to a subalphabet of symbols included within said alphabet of symbols, said subalphabet of symbols consisting of symbols which, in isolation or combination, give the burst in which the linearization training sequence is transmitted a narrower spectrum than said alphabet of symbols as a whole.

24. The sequence as claimed in claim 23, further comprising a determined number N2 of other symbols transmitted last, at least certain of which belong to

the alphabet of symbols excluding said subalphabet of symbols, or N2 is an integer less than N.

25. The sequence as claimed in claim 24, wherein a majority or the totality of said N2 other symbols transmitted last belong to the alphabet of symbols excluding said subalphabet of symbols.

26. The sequence as claimed in claim 24 or claim 25, wherein N1+N2=N.

27. The sequence as claimed in any one of claims 23 to 26, wherein the number N is fixed.

28. The sequence as claimed in any one of claims 23 to 27, wherein the alphabet of symbols is the alphabet {-3,-1,+1,+3} of the symbols of the so-called F4FM modulation.

29. The sequence as claimed in claim 28, wherein the N1 symbols sent first belong to the subalphabet {-1,+1}.

30. The sequence as claimed in claim 24 and one of claims 28 and 29, wherein the N2 symbols sent last belong in the majority or even as a totality to the subalphabet {-3,+3}.